CLAIMS

What is claimed is:

1 1.   A method of determining a value of an attribute of an object comprising:

2   attempting to determine the value by

3   formulating a first query to retrieve the attribute from a properties data

4   store based upon a combination of a current context identifier, an object identifier

5   associated with the object, and an attribute identifier associated with the attribute,

6   submitting the first query through an application programming interface

7   (API) associated with the properties data store, and

8   receiving results associated with the first query; and

9   if the first query is unsuccessful at locating the value, then determining the value

10   by

11   formulating a second query to retrieve the attribute from the properties

12   data store based upon a combination of the object identifier and the attribute

13   identifier,

14   submitting the second query through the API, and

15   receiving results associated with the second query.

1 2.   The method of claim 1, wherein the properties data store comprises one or more

2   Java properties files.

1 3.   The method of claim 1, wherein the first query is compliant with standard Java

2   properties files, and wherein the first query includes a string value representing

3   the current context identifier, the object identifier, the attribute identifier, and

4   delimiters separating the identifiers from each other.

1 4.   The method of claim 2, wherein the second query is compliant with standard Java

2   properties files, and wherein the second query includes a string value representing

3   the object identifier, the attribute identifier, and a delimiter to separate the object

4   identifier and the attribute identifier.

1   5.   A method of determining a value of an attribute of an object stored in a Java

2   properties file, the method comprising:

3   attempting to determine the value by initiating a first attribute retrieval stage that

4   formulates and applies a first set of queries that traverse an object hierarchy associated

5   with the object within a fixed context to a properties data store, each query of the first set

6   of queries including a current context identifier, an object identifier associated with an

7   object of the object hierarchy, and an attribute identifier associated with the attribute; and

8   if the first attribute retrieval stage is unsuccessful, attempting to determine the

9   value by initiating a second attribute retrieval stage that formulates and applies a second

10   set of queries that traverse both the object hierarchy and a context hierarchy associated

11   with the current context, each query of the second set of queries including a context

12   identifier associated with a context of the context hierarchy, an object identifier

13   associated with an object of the object hierarchy, and the attribute identifier; and

14   if the second attribute retrieval stage is unsuccessful, attempting to determine the

15   value by initiating a third attribute retrieval stage that formulates and applies a third set of

16   queries that traverses the object hierarchy without regard for context, each query of the

17   third set of queries including an object identifier associated with an object of the object

18   hierarchy and the attribute identifier.

1   6.   The method of claim 5, wherein the object inherits the attribute from a base object

2   defined in the Java properties file.

1   7.   The method of claim 6, wherein the object overrides the value assigned to the

2   attribute in connection with the base object.

1   8.   The method of claim 7, wherein the object represents a prompt of a graphical user

2   interface.

1   9.   The method of claim 5, wherein the current context inherits the attribute from a

2   base context.

1   10.   The method of claim 9, wherein the current context overrides the value assigned

2   to the attribute in connection with the base context.

1   11.   The method of claim 10, wherein the current context represents a particular page

2   of a website.

1   12.   A system for maintaining attribute-value pairs comprising:

2   a Java properties file having stored therein values of a plurality of attributes

3   associated with one or more objects, the one or more objects represented

4   in an improved properties file syntax that is compliant with standard Java

5   properties file semantics thereby making the existence of the one or more

6   objects transparent to Java;

7   a Java application programming interface (API) to receive and apply queries for

8   attribute values to the Java properties file; and

9   a syntax enhancement layer residing above the Java API that is able to receive and

10   parse queries formulated according to the improved properties file syntax

11   and issue appropriate queries to the Java API.

1   13.   The system of claim 12, wherein the syntax enhancement layer determines a value

2   of an attribute of an object stored in the Java properties file by employing at least

3   a first attribute retrieval stage, a second attribute retrieval stage, and a third

4   attribute retrieval stage, the first attribute retrieval stage formulates and applies a

5   first set of queries that traverse an object hierarchy associated with the object

6 within a fixed context to the Java properties file via the Java API, each query of

7 the first set of queries including a current context identifier, an object identifier

8 associated with an object of the object hierarchy, and an attribute identifier

9 associated with the attribute, the second attribute retrieval stage is responsive to

10 unsuccessful completion of the first attribute retrieval stage and formulates and

11 applies a second set of queries that traverse both the object hierarchy and a

12 context hierarchy associated with the current context, each query of the second set

13 of queries including a context identifier associated with a context of the context

14 hierarchy, an object identifier associated with an object of the object hierarchy,

15 and the attribute identifier; and the third attribute retrieval stage is responsive to

16 unsuccessful completion of the second attribute retrieval stage and formulates and

17 applies a third set of queries that traverses the object hierarchy without regard for

18 context, each query of the third set of queries including an object identifier

19 associated with an object of the object hierarchy and the attribute identifier.

1 14. A machine-readable medium having stored thereon data representing sequences of

2 instructions, the sequences of instructions which, when executed by a processor,

3 cause the processor to:

4 attempt to determine a value of an attribute of an object by

5 formulating a first query to retrieve the attribute from a properties data

6 store based upon a combination of a current context identifier, an object identifier

7 associated with the object, and an attribute identifier associated with the attribute,

8 submitting the first query through an application programming interface

9 (API) associated with the properties data store, and

10 receiving results associated with the first query; and

11 if the first query is unsuccessful at locating the value, then attempt to determine

12 the value by

13   formulating a second query to retrieve the attribute from the properties

14   data store based upon a combination of the object identifier and the attribute

15   identifier,

16   submitting the second query through the API, and

17   receiving results associated with the second query.

1   15.   A machine-readable medium having stored thereon data representing sequences of

2   instructions, the sequences of instructions which, when executed by a processor,

3   cause the processor to:

4   attempt to determine a value of an attribute of an object stored in a Java properties

5   file by initiating a first attribute retrieval stage that formulates and applies a first set of

6   queries that traverse an object hierarchy associated with the object within a fixed context

7   to a properties data store, each query of the first set of queries including a current context

8   identifier, an object identifier associated with an object of the object hierarchy, and an

9   attribute identifier associated with the attribute;

10   attempt to determine the value by initiating a second attribute retrieval stage in

11   response to unsuccessful completion of the first attribute retrieval stage that formulates

12   and applies a second set of queries that traverse both the object hierarchy and a context

13   hierarchy associated with the current context, each query of the second set of queries

14   including a context identifier associated with a context of the context hierarchy, an object

15   identifier associated with an object of the object hierarchy, and the attribute identifier;

16   and

17   attempt to determine the value by initiating a third attribute retrieval stage in

18   response to unsuccessful completion of the second attribute retrieval stage that formulates

19   and applies a third set of queries that traverses the object hierarchy without regard for

20   context, each query of the third set of queries including an object identifier associated

21   with an object of the object hierarchy and the attribute identifier.